

REMARKS

Amendments to the claims

Claim 15 has been clarified to recite "*A device as claimed in claim 12 wherein the first and second measuring device are ~~optical systems~~ is incorporated into a common optical sensing device*". This amendment is supported by the specification as filed, for example paragraphs [0032] to [0041].

Claim 12 has been amended to recite "*processing means adapted to initialize the position of the vector to the at least one absolute position measurement so as to ~~and~~ output a signal representing the absolute position of the vector and thus the time-varying absolute position of the device*". This amendment is supported by the specification as filed, for example paragraph [0017].

No new matter has been added.

Rejection under 35 U.S.C. 112

Claim 15, which depends on independent claim 12, stands rejected under 35 U.S.C. 112 as reciting "the first and second optical systems" whereas claim 12 does not recite first and second optical systems. The language of claim 15 has been amended to recite the first and second measuring devices recited in claim 12. Accordingly, the Applicant respectfully requests the Examiner to withdraw this rejection of claim 15.

Rejection under 35 U.S.C. 102

Claims 1, 3, 4, 12, 17, 18 and 20 stand rejected under 35 U.S.C. 102(e) as being anticipated by Published U.S. Patent Application No. 20010055063 to Nagai. The Applicant respectfully disagrees.

Claim 1

In the Action, the Examiner asserts that Nagai teaches a method for "determining the time-varying absolute position of a device with respect to a surface, comprising: measuring at least one absolute position of the device with respect to the surface". The Applicant respectfully disagrees.

The Examiner asserts that Nagai teaches "initializing the position of the vector to the at least one absolute position measurement thereby measuring the absolute position of the vector and thus the time-varying absolute position of the device". The Applicant respectfully disagrees.

Nagai provides for calculating the position of the robot relative to characteristic points. When the characteristic points have known absolute positions, the position relative to said characteristic points is an absolute position of the robot (paragraph [0070]). The Applicant notes that Nagai discloses to first calculate the position of the robot, and then calculate the motion of the robot: Nagai "calculates the amount the robot moved from time at which the previous image was acquired to the time at which the current image (input image) was acquired based on the amount of movement of that characteristic point and the relative position of the robot" (see paragraph [0068]).

The Applicant therefore submits that Nagai teaches away from a process which provides for first "*measuring a time-varying vector representing the relative movement of the device with respect to the surface*" and then "*initializing the position of the vector to the at least one absolute position measurement thereby measuring the absolute position of the vector and thus the time-varying absolute position of the device*", as recited in claim 1.

Further, Nagai discloses calculating a position and calculating an amount of movement of the robot, not measuring a position or measuring a time-varying vector representing the relative movement of a device, as recited in claim 1.

Accordingly, the Applicant submits that claim 1 is patentable over Nagai.

Claim 12

The above arguments can be used to show that Nagai actually teaches away from a measurement device as recited in claim 12, and in particular comprising "*a second measuring device arranged to determine a time-varying vector representing the relative movement of the device with respect to the surface; processing means adapted to initialize the position of the vector to the at least one absolute position measurement so as to output a signal representing the absolute position of the vector and thus the time-varying absolute position of the device*". Accordingly, the Applicant submits that claim 12 is patentable over Nagai.

Claims 3, 4, 17, 18 and 20

Claims 3, 4 and 20 depend on claim 1 and claims 17 and 18 depend on claim 12. The Applicant submits that at least in view of their dependency on claim 1 or 12, claims 3, 4, 17, 18 and 20 are patentable over Nagai.

Rejection under 35 U.S.C. 103

Claims 2 and 13, as well as 5-9, 16, 19 and 23, stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai in view of U.S. Pat. No. 6,792,165 to Silverbrook; claims 10 and 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai in view of U.S. Pat. No. 6,741,335 to Kinrot. The Applicant respectfully disagrees.

Claim 2

In the Action, the Examiner asserts that Nagai teaches "measuring the relative movement of the device with respect to the surface and thereby calculating a time-varying motion vector representing the movement of the device with respect to the surface". The Applicant respectfully disagrees, and submits that Nagai "calculates the amount the robot moved from time at which the previous image was acquired to the time at which the current image (input image) was acquired based on the amount of movement of that characteristic point and the relative position of the robot" (paragraph [0068]), and thus teaches calculating first the position of the robot, and then calculating the amount the robot moved based on the position of the robot, and therefore teaches away from "calculating the absolute location of the stroke with respect to the surface on the basis of at least one measurement of the absolute position in combination with the time-varying motion vector", as recited in claim 2.

Further, the Applicant submits that Nagai teaches "calculating" the movement of the robot, not "measuring" the relative movement of a device, as recited in claim 2.

The Applicant submits that the Examiner has failed to show that Silverbrook discloses or suggests a method as recited in claim 2, and in particular comprising: "measuring the relative movement of the device with respect to the surface and thereby

calculating a time-varying motion vector representing the movement of the device with respect to the surface; and calculating the absolute location of the stroke with respect to the surface on the basis of at least one measurement of the absolute position in combination with the time-varying motion vector".

In view of the above, the Applicant submits that the Examiner has failed to show that a combination of Nagai and Silverbrook would have led one skilled in the art to a process as recited in claim 2, and submits that claim 2 is patentable over Nagai in view of Silverbrook.

Claim 13

The above arguments can be used to show that the Examiner has failed to show that a combination of Nagai and Silverbrook would have led one skilled in the art to a measurement device as recited in claim 13, and in particular comprising "*a second measuring device arranged to measure the relative movement of the device with respect to the surface and output a time-varying motion vector representing the movement of the device with respect to the surface; and processing means adapted to calculate the absolute location of the stroke with respect to the surface on the basis of the at least one measurement of the absolute position in combination with the measurement of the time-varying motion vector".* Accordingly, the Applicant submits that claim 13 is patentable over Nagai in view of Silverbrook.

Claims 5-9, 16, 19 and 23,

Claims 5-9 and 23 depend on claim 1 and claims 16 and 19 depend on claim 12. The above arguments can be used to show that the Examiner has failed to show that a combination of Nagai and Silverbrook would have led one skilled in the art to a method as recited in claim 1, and in particular comprising: "*measuring a time-varying vector representing the relative movement of the device with respect to the surface; and initializing the position of the vector to the at least one absolute position measurement thereby measuring the absolute position of the vector and thus the time-varying absolute position of the device*", or to a measurement device as recited in claim 12, and in particular including "*a second measuring device arranged to determine a time-varying vector representing the relative*

movement of the device with respect to the surface; processing means adapted to initialize the position of the vector to the at least one absolute position measurement so as to output a signal representing the absolute position of the vector and thus the time-varying absolute position of the device". Accordingly, the Applicant submits that claims 1 and 12 are patentable over Nagai in view of Silverbrook.

The Applicant submits that at least in view of their dependency on claims 1 and 12, claims 5-9 and 23 and 16, 19 are patentable over Nagai in view of Silverbrook.

Claims 10 and 11

Claims 10 and 11 depend on claim 1. The Applicant submits that the Examiner has failed to show that a combination of Nagai and Kinrot would have led one skilled in the art to a method as recited in claim 1, and in particular comprising: *"measuring a time-varying vector representing the relative movement of the device with respect to the surface; and initializing the position of the vector to the at least one absolute position measurement thereby measuring the absolute position of the vector and thus the time-varying absolute position of the device"*. Accordingly, the Applicant submits that claim 1 is patentable over Nagai in view of Kinrot.

The Applicant submits that at least in view of their dependency on claim 1, claims 10 and 11 are patentable over Nagai in view of Kinrot.

Allowable subject matter

Applicants acknowledge with gratitude the Examiner's indication of allowability as to claims 14, 21, 22 and 24. Claim 14 depends on claim 12, and claims 21, 22 and 24 depend on claim 1. However, the Applicant submits that, as shown above, claims 1 and 12 are patentable over the cited Art.

* * *

In view of the above, the Applicant submits that the application is now in condition for allowance and respectfully urges the Examiner to pass this case to issue.

The Commissioner is authorized to charge any additional fees that may be required or credit overpayment to deposit account no. 08-2025. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 08-2025.

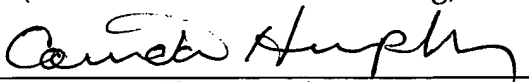
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(Date of Transmission)

Corinda Humphrey

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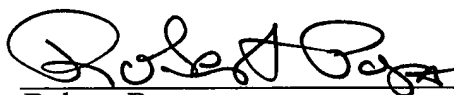


(Signature)

March 31, 2005

(Date)

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